

REMARKS

The Examiner is thanked for the due consideration given the application. The specification has been amended to improve the headings.

Claims 7, 8 and 19-36 are pending in the application. By this amendment, claim 6 has been canceled and its subject matter has been incorporated into claim 7, which has also been amended to stand as an independent claim. The amendments to claim 7 find additional support in the specification at page 7, lines 1-3. Claim 19 has been amended to be an independent claim and to generally incorporate subject matter from canceled claim 6.

Claims 23-36 are newly presented for consideration on the merits. New claims 23-27 and 29-35 find support in the specification at page 7, lines 8-15. New claims 28 and 36 find support in the specification at page 8, line 10.

No new matter is believed to be added to the application by this amendment.

Objection To Claim 6

Claim 6 is objected to as containing an informality. Claim 6 has been canceled, thereby rendering this objection moot.

Rejections Under 35 USC §112

Claims 6-8 and 19 have been rejected under 35 USC §112, first paragraph as not being enabled. Claims 6-8 and 19 have

been rejected under 35 USC §112, second paragraph as being indefinite. These rejections are respectfully traversed.

The Official Action asserts that claim 6 lacks essential subject matter and omits essential steps. However, claim 6 has been canceled and its subject matter has been incorporated into newly independent claim 7. Instant claim 7 sets forth sufficient subject matter set forth in definite method steps. Claim 7 (and its dependent claims) is thus enabled and contains subject matter set forth in a way that is clear, definite and has full antecedent basis.

This rejection is believed to be overcome, and withdrawal thereof is respectfully requested.

Rejection Over CANO et al.

Claims 6-8 and 19 have been rejected under 35 USC §102(b) as being anticipated by CANO et al. (U.S. Patent 4,242,501). This rejection is respectfully traversed.

The present invention pertains to a method of recovering a polysaccharide from a fermentation broth in which a maximum of 4 precipitation steps is used.

CANO et al. pertains to the purification of pneumococcal capsular polysaccharides. The Official Action refers to Example 2 of CANO et al. However, Example 2 of CANO et al. utilizes more than 4 precipitation steps. Example 2 of CANO et al. also fails to disclose or suggest utilization of an

anionic detergent, such as is set forth in independent claim 7 of the present invention.

CANO et al. discloses the utilization of Cetavlon (hexadecyltrimethyl ammonium bromide). However, CANO et al. utilizes Cetavlon after 2 alcohol precipitations. In contrast, the present invention uses cationic ammonium surfactant in the first step, as is set forth in claims 8 and 19 of the present invention.

The Official Action further refers to columns 3 and 4 of CANO et al. A scheme is present at the bottom of column 4 explaining all the steps that are typically carried out in their process. Several differences are found between the process described in this passage and claim 7 and/or claim 8:

it teaches that at least 5 precipitations by alcohol should be carried out,

in the first precipitation, no cationic detergent is used, and

an anionic detergent is used to lyse the cell at the end of the fermentation process (desoxycholate). Cellular debris is subsequently removed, and this is followed by alcohol precipitation (column 3, lines 48-55). In the present invention, the anionic detergent is not used to lyse the cells.

Additionally, the meaning of "fractional precipitation" in CANO et al. reveals a fundamentally different technology. It is noted above that CANO et al. uses 5 precipitations with alcohol.

This number is actually larger if we use the terminology of CANO et al., where they perform two fractional alcohol precipitations and three alcohol precipitations. The meaning of both types of precipitations is explained at column 3, line 64 to column 4, line 8 of CANO et al. It is clear that a fractional alcohol precipitation corresponds to two distinct alcohol precipitations. Therefore, the method of this patent does not use 5 but 7 alcohol precipitations, which is fundamentally different from the method of the present invention, which has a maximum of 4 precipitations.

As a result, CANO et al. clearly fails to anticipate the present invention. This rejection is believed to be overcome, and withdrawal thereof is respectfully requested.

Rejection Over BROWN et al.

Claims 6 and 7 have been rejected under 35 USC §102(b) as being anticipated by BROWN et al. (U.S. Patent 5,316,926). This rejection is respectfully traversed.

BROWN et al. purifies hyaluronic acid using five ethanol precipitations. An anionic detergent is used for precipitation. However, no alcohol is immediately added in BROWN et al. Incubation anionic surfactant is used to separate the cells from the hyaluronic acid (column 8, lines 3-7).

In contrast, claim 7 of the present invention recites "adding alcohol until a concentration is below a concentration necessary for precipitating the polysaccharide."

Therefore, the technology of BROWN et al. is fundamentally different from that of the present invention. BROWN et al. thus fails to anticipate the present invention as is set forth in instant claim 7 (which incorporates the subject matter of canceled claim 6).

This rejection is believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

The Examiner is thanked for considering the Information Disclosure Statement filed March 10, 2006 and for making an initialed PTO-1449 form of record in the application.

Prior art of record but not utilized is believed to be non-pertinent to the instant claims.

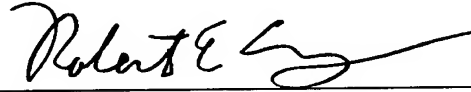
The objection and rejections are believed to be overcome, obviated or rendered moot, and that no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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